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A comparative study of Service Quality in Portuguese and Angolan Higher Education

Abstract. Quality in education is a passionate topic, which is reflected in the educational levels of a society. Many studies consider students as stakeholders, however, families, employers and society, in general, can also be considered stakeholders in this educational process. This article addresses the issue from an international perspective, that results from a collaborative work carried out by Portuguese and Angolan researchers. The aim is to study service quality in two Higher Education Institutions (HEIs), one in Portugal and one in Angola. The study was based on the HEISQUAL model, a modern approach to measuring the quality of service in higher education institutions. This survey follows a convenience sampling technique. It was possible to conclude that, for the institutions under study, the HEI located in Angola presents lower values than those obtained from the Portuguese HEI regarding the points attributed by the respondents for the evaluation of the different items, for which a 5-point Likert scale was used. Based on these results, the items that should be further worked on were identified and good practices to be implemented were identified. In addition to the scientific component, this work is based on a greater concern, namely the contribution of this study to Sustainable Development Goal (SDG) 4 – Quality Education. It is expected that the application of good practices will result in the improvement of the quality of education perceived by the students.

Keywords: Education, HEI, Quality, HEISQUAL.

1 Introduction

Competition among higher education institutions (HEIs) is increasingly high. According to Wilkins (2020) and Rolo et al. (2023), higher education has become a very competitive market and there is great pressure on HEIs to improve performance and quality.

A school is an organization and as such it must act like a company in managing its resources and attracting its customers. Rolo et al., (2023) refer that this effort is increasingly important due to current pressures related to the decrease in birth rates and the increase in the formative offer (number of courses, programs and degrees). HEIs had to react to this new reality, trying to attract students. For this reason and more than ever, quality in HEIs has received enormous attention from many stakeholders, such as the

government, university directors, students and their parents, researchers and academics, as they are responsible for turning students into valuable resources for businesses. Therefore, it is very important to measure and monitor the quality of services provided.

Measuring quality in higher education is a complex and multidimensional process that involves a variety of dimensions and therefore requires a comprehensive and holistic approach that takes the different dimensions into account (Dwaikat, 2021). For this purpose, it is essential to identify quality indicators and use an adequate measurement instrument.

Harvey and Green (1993), identified four dimensions of quality in education: input quality (referring to the characteristics of students, faculty, resources, and facilities that are needed for effective delivery of education); process quality (referring to the teaching and learning processes and the quality of student-teacher interactions that will influence student engagement and satisfaction); output quality (refers to the knowledge and skills students acquire as a result of their education; graduation rates and time to graduation) and outcome quality (the broader impact of higher education on individuals and society, as employability and civic engagement, employer satisfaction and hiring rates; contribution to local and global communities).

Shah and Nair (2016) also identified four dimensions but different from the previous ones, namely: social responsibility, sustainability, diversity and inclusion and entrepreneurship. The authors argued that these dimensions are increasingly important in higher education, as institutions seek to adapt and respond to changing needs in society.

Simultaneously, several instruments were being tested to measure service quality in HEIs: SERVQUAL, by Parasuraman, Zeithaml and Berry (1988); Fuchs & Fangpong (2021), SERVPERF, by Cronin and Taylor (1992) and HEdPERF, by Abdullah (2006). However, these instruments had some limitations despite having been modified and adapted.

HEISQUAL is presented as an instrument that measures quality of service exclusively in HEIs, from the perspective of students. It also eliminates the operational (process) and technical (end results) deficiencies identified in previously tested scales (Abbas, 2020). These reasons justify its choice to test in this comparative study.

This study aims to present a comparative study on service quality in higher education institutions. It was conducted in Portugal and Angola to make a cross-comparison between two different higher education institutions, one belonging to the polytechnic higher education network in Portugal and a University in Angola. In this first exploratory study, the institutions involved will not be identified, because the authorizations did not arrive in time for the submission of this article.

This article presents the following structure: introduction, presentation of the HEISQUAL Model, methodology, presentation and discussion of results, conclusions, limitations and proposals for future research.

2 HEISQUAL Model

Despite the lack of consensus regarding the definition of service quality dimensions, there are some consensus that quality should be determined by stakeholders, such as

the students, their parents and family, academic and administration staff, and society (Trivellas & Dargenidou, 2009).

As said before, after some instruments have been used to measure the quality of services, such as SERVQUAL and SERFPERF, Abbas (2020) proposes a new instrument called HEISQUAL to measure the Quality of services in HEIs; it is composed of seven main dimensions, sixteen sub-dimensions, and several items (Table 1).
The dimensions identified by Abbas, are:

- **Teachers' profile:** this dimension was further divided into four sub-dimensions, namely: teachers' subject knowledge (4 items); communication skills (4 items); teaching style (4 items) and behavior with students (5 items).

- **Curriculum:** This factor with a single dimension, which contained four items include: "The curriculum taught at my university is comprehensive and easy to understand"; "The curriculum taught at my university improves students' intellectual abilities (decision making, problem-solving)"

- **Infrastructure and facilities**: this theme is divided into three dimensions, namely learning facilities (4 items), supportive facilities (3 items), and cleanliness and maintenance (3 items).

- **Management and support staff:** this theme is further divided into two dimensions, namely behavior with students (3 items) and administrative work (6 items).

- **Employment quality:** this theme is further divided into two dimensions, namely links with employers (3 items) and employability training (4 items).

- **Safety and security**: This theme is also divided into two dimensions, namely security measures (4 items) and safety equipment (3 items).

- **Students' skills development:** This theme is divided into two dimensions, namely extra-curricular activities (3 items) and personal development (6 items).

Once the scale has been fine-tuned and validated, it meets the necessary requirements for assessing the quality of the service, thus constituting an instrument that we will test.

3 Metodology

The present research follows a mixed method technique to compare the quality of service (SQ) between two HEIs from two different countries (Portugal and Angola), using the HEISQUAL model, consisting of seven dimensions that consider both operational and technical elements (and are subdivided into sub-dimensions) composed of items that respondents (students from both institutions) evaluated on a 5-point Likert scale, where: 1- Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree and 5 - Strongly Agree.

The research was conducted in January 2023. Respondents were students of two HEI, one from Portugal and other from Angola. The resulting sample comprised 365 valid questionnaires from Portuguese HEI (response rate about 15%) and 187 valid questionnaires from Angolan HEI (response rate about 27%).

The research instrument was a structured questionnaire based on a five-point likert scale, developed by Abbas (2020) to measure the service quality in HEI. Means of the items were calculated (Table 1) to have a comparison between the to samples, and the mean value of each dimension (Table 2 and Fig.1).

This study aims to investigate, firstly, which are the "strongest" and "weakest" dimensions, and to explain some values identified in Table 1 with a circle, namely: all means equal to or less than 2.5 (considered " negatives"); all items with GAP above 1.0 (the gap above one point, between the different HEIs, is considered very expressive and we need to find explanations for such a difference) and the negative GAPs (which represent a greater "satisfaction" of the students Angolans, something that reflects an unusual situation). Focus group sessions were organized in order to collect informations/explanations about these results. The participants were 32 from the Portuguese HEI an 16 from Angolan HEI; the ages were between 19 and 33 years. The participants were briefly informed about the objectives of the research in general and were given the option of a focus group session or an individual interview; 12 Portuguese students volunteered for focus group sessions and 10 opted for an individual interview. The Angolan students 9 choose focus group sessions and 7 opted for an individual interview.

4 Data Analysis and Results

In addition to filling out the questionnaires, that the summarized means were registered in table 1, the following questions were asked (following Abbas, 2020 example):

(1) What are the factors that constitute good service quality in higher education institutions?
(2) What are the areas in which your institution is performing well?
(3) What are the areas where your institution should improve?

The information obtained from the interviews and focus group, summarized and crossed with the information obtained from the questionnaire, is presented below:

- **Teachers' profile:** Almost all participants in the interviews and focus groups highlighted the fundamental role of teachers, although, in terms of averages, the dimensions that stood out the most were "Infrastructure and Facilities" and "Employment Quality", with an average 4.4 for Portuguese students and "Students' Skills Development" (3.8) and "Curriculum" (3.7) for Angolan students (table 2). In this dimension, Gaps greater than 1 value (1.45) were highlighted in items related to language skills and confidence, as Angolan students identified these weaknesses in their teachers.

- **Curriculum:** Most of the participants focused on the importance of curriculum concerning understand-ability, comprehensiveness, and role in developing the skills required.

- **Infrastructure and Facilities**: This is one of the dimensions with the highest average for Portuguese students, which demonstrates the importance given to it, however Angolan students classify some of the items less well, namely those related to library resources and equipment (air conditioning, projectors, interactive whiteboards). This classification gave rise to Gaps greater than one point and reflects the Angolan reality of the lack of educational infrastructure. Still in terms of accommodation for students and staff, both groups of students classify the accommodation offer as weak, especially the group of Angolan students that gave a negative mark (2,3).

- **Management and support staff:** Similar to teachers, students daily have to interact with the management and support staff of their institution. In this regard, the behavior of management and support staff and the efficiency and effectiveness in their processes are highly important. This topic is the one that is worst evaluated by both groups (3.3 average of Portuguese students and 3.1 of Angolans). Administrative processes and service opening hours are the most critical items.

- **Employment quality:** Because of the highly competitive job market and the dynamics of the industry, a large number of participants highlighted the important role of their educational institution in developing employability skills, providing employment training, and the links of their educational institutions with potential employers. Angolan students identified some shortcomings at this level, evaluating between 3.3 and 3.65, which contrasts with the good evaluation attributed to this service by Portuguese students, which results in gaps above 1 point.

- **Safety and security**: Some students mentioned their concerns about the safety and security services offered by their HEI, particularly concerning facilities in the case of an emergency. Some students mentioned their concerns about the safety and security equipment offered by their HEI, particularly concerning facilities in the case of an emergency (first aid equipment and fire extinguishers) - Angolan students classified these items negatively.

- **Students' skills development:** This theme is focused on the social and personal development aspects of students, as many students believe that, along with academic development, HEIs should also concentrate on students' personality development. Portuguese students classify this dimension well, which has the second best average. For Angolan students this is the dimension with the highest average, given the importance they recognize.

Table 1. HEISQUAL Framework – Survey Data Summary

Dimensions	Sub-Dimensions	ITEMS	Portuguese HEI	Angolan HEI	Dif. GAP
Teachers' Profile	Subject Knowledge	My instructors have comprehensive knowledge of their field	4,8	4,1	0,7
		The knowledge possessed by my instructors is up-to-date	4,7	3,9	0,8
		My instructors have adequate knowledge to answer students' questions	4,4	3,5	0,9
		My instructors give real-life examples to enhance students' understanding	4,75	4,6	0,15
	Communication Skills	The communication skills of my instructors are excellent	4,83	4,25	0,58
		My instructors have effective command over the course language (English, German, Spanish)	4,5	3,05	**1,45**
		I can easily understand the concepts explained by my instructors	4,76	4,6	0,16
		My instructors communicate in a polite and respectful manner	4,1	4,25	-0,15
	Teaching Style	My instructors explain the complex concepts in an easy and understandable manner	4,2	3,65	0,55
		My instructors create an interactive environment in the class and engage students' interest	3,9	3,7	0,2
		My instructors ensure active class participation of students	4,6	3,9	0,7
		My instructors use different tools and techniques to enhance students' learning (games, class activities)	4,3	4,05	0,25
	Behaviour with Students	My instructors demonstrate non-biased and non-discriminating behaviour	4,5	3,3	1,2
		Instructors in my university instil confidence in students	4,45	3,0	**1,45**
		My instructors show interest in understanding and solving students' problems	4,6	3,4	1,2
		My instructors follow fair grading criteria	4,7	4,1	0,6
		My instructors regularly give feedback to students on their academic performance	4,2	3,8	0,4
Curriculum	Curriculum Quality	The curriculum taught at my university is comprehensive and easy to understand	3,6	3,55	0,05
		The curriculum taught at my university helps students to think in creative and proactive way	4,15	3,85	0,3
		The curriculum taught at my university improves students' intellectual abilities (decision making, problem-solving	4,4	3,93	0,47
		My university designs curricula by considering future job perspectives for students	3,8	3,35	0,45
Infrastructure and Facilities	Learning Facilities	My university has adequate library resources (books, magazines, newspapers, study space, furniture, access to online databases)	4,85	3,2	**1,65**
		My university ensures availability of supportive tools and equipment for learning e.g. internet/Wi-Fi, whiteboards, projector, air conditioner	4,75	2,9	**1,85**
		The number of students per class is maintained at low to medium levels	4,25	3,3	0,95
		Lectures in my university are held as per the timetable and course content	4,15	3,4	0,75
	Supportive Facilities	My university provides satisfactory transportation, cafeteria, and bookshop services to students and staff members	4,65	4,15	0,5
		My university provides adequate housing facilities to students and staff members	3,2	**2,3**	0,9
		Prices and quality of goods and services in my university are reasonable	4,5	4,2	0,3
	Cleanliness and Maintenance	My university has sufficient and well-maintained classrooms	4,15	4,0	0,15
		The campus is kept neat and clean	4,85	4,15	0,7
		My university campus and buildings are visually appealing and eye-catching	4,9	4,25	0,65
Management and Support Staff	Behaviour with Students	Management and support staff of my university deal with students in an appropriate manner	4,1	3,6	0,5
		Management and support staff deal with all students fairly and equally	4,15	3,25	0,9
		Management of my university gives value to students' feedback	4,3	4,25	0,05
	Administrative Work	Admin and support staff of my university have effective communication skills	3,15	2,7	0,45
		Admin and support staff of my university have comprehensive knowledge of their job	3,0	2,85	0,15
		Admin and support staff of my university keep accurate and up-to-date records	2,85	2,65	0,2
		Administrative processes at my university are clear and well structured	**2,5**	2,75	**-0,25**
		Admin and support staff (willing to) solve students' problem on time	3,15	3,1	0,05
		The operating hours of my university are convenient for all	**2,5**	2,7	**-0,2**
Employment Quality	Links with Employers	My university has strong relations with the industry for its students' employment	4,55	4,1	0,45
		My university helps its graduates in finding jobs	3,15	**2,3**	0,85
		My university regularly organizes different job and industry interaction events	4,65	3,5	**1,15**
	Employability Training	My university has active job placement/work experience service for students	4,7	3,65	**1,05**
		Different employability seminars are offered by my university to graduating students	4,65	3,3	**1,35**
		The graduates of my university are highly employable and have high demand in the industry	4,2	3,35	0,85
		My university has a good reputation in the industry based on their graduates' job performance	4,55	3,6	0,95
Safety and Security	Security Measures	My university ensures high standards of safety and security on campus	4,35	3,4	0,95
		Security staff in my university are well trained and professional	4,2	3,5	0,7
		Security staff is provided with suitable and modern equipment	4,1	3,45	0,65
		My university has installed an adequate number of security cameras and metal detectors	3,5	2,9	0,6
	Safety Equipment	My university has installed an adequate number of fire extinguishers	3,8	**2,5**	1,3
		My university has an adequate number of first aid equipment	2,6	**2,3**	0,3
		People within my university campus feel secure and confident	4,5	3,7	0,8
Students' Skills Development	Extra-Curricular Activities	My university ensures adequate recreational and sports facilities	4,1	3,3	0,8
		My university provides financial and non-financial support for extra-curricular activities	3,9	3,4	0,5
		My university organizes different extra-curricular activities on a regular basis	4,3	3,25	1,05
	Personal Development	The atmosphere in my university instils leadership and active team player attributes in students	4,0	3,7	0,3
		The atmosphere at my university develops students' soft skills (communication, critical and logical thinking, problem-solving)	4,5	3,95	0,55
		My university environment develops self-confidence and emotional stability in students	4,15	3,8	0,35
		The atmosphere in my university promotes acceptance and equality in students	4,0	3,55	0,45
		My university environment develops the intellectual abilities of students (creativity, decision making, high-quality work)	4,5	3,9	0,6
		My university environment promotes conscientiousness (taking responsibility, time management, organizing things) in students	4,5	3,9	0,6

By calculating the averages per dimension, we have the perspective of which dimensions are stronger and which are weaker.

Table 2. HEISQUAL – Mean by dimension.

HEI Service Quality Dimensions	Portuguese HEI Mean	Angolan HEI Mean
Teachers' Profile	4,2	3,6
Curriculum	4,0	3,7
Infrastructure and Facilities	4,4	3,6
Management and Support Staff	3,3	3,1
Employment Quality	4,4	3,4
Safety and Security	3,9	3,1
Students' Skills Development	4,3	3,8

Observing Table 2, we can conclude, and answer question 2, that the most important dimensions, for Portuguese students, are Infrastructure and facilities and job quality, with (4.4) followed very closely by Students' Skills Development (4.3) which is the dimension most valued by Angolan students, for whom the curriculum is the second major dimension.

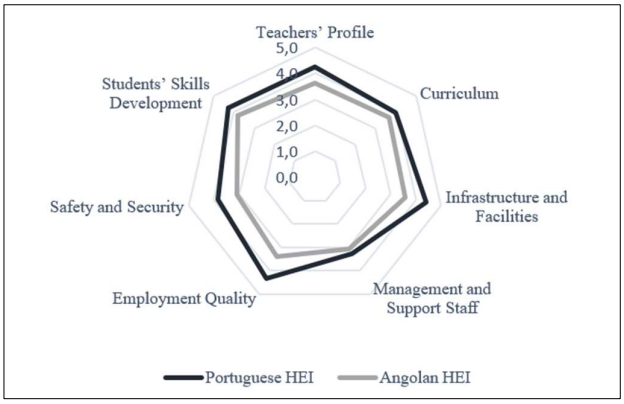


Fig. 1. Comparative HEISQUAL Dimensions Mean.

The areas where both institutions should improve, are: the administrative processes, and the support facilities, specially residences. Particularly, the Angolan HEI are facing other challenges related with the linguistic competences of professors, some difficulties with administrative staff and the link with the employers to help students to find a job.

5 Conclusion

Since education is considered by many to be the best tool to promote sustainable development, it is necessary to focus on "Quality Education" (SDG 4) and on access to education for all, reducing inequalities (SDG 10).

In this research, the factors that constitute a good quality of service in higher education institutions were identified; the dimensions in which your institution is performing well and the areas in which your institution should improve. We are thus in possession of important information for decision making. We can suggest measures that may be implemented to improve these situations through benchmarking.

For HEI Angola, it is suggested that there be a clear focus on training teachers and researchers to be fluent in English. The administrative processes must be reviewed and optimized. It is suggested too, the creation of an internship and employability office that ensures communication between the university and employers, promoting job offers among students. We also propose monitoring the implementation of these procedures, as well as their evolution.

6 Limitations, and Future Research Proposals

The limitations of this research work relate to the cultural differences between the two countries (Langa, 2013) and limitations related to data collection (convenience sampling). Data were collected in Portugal and Angola, so the inclusion of other countries can provide opportunities for cross-comparison between different cultures in higher education.

The present study should be interpreted as a starting point for the validation of this instrument for measuring the quality of HEIs (HEISQUAL), from the perspective of the students. In future work intends to increase the sample size to enable more robust analyses. It is also recommended that the same study be replicated in countries with different levels of development to confirm the identified dimensions.

Thus, as future research projects, we propose to extend the analysis to more HEIs, in these same two countries, in an initial phase, with the later possibility of extend-ing it geographically to more countries, namely Brazil, Cape Verde and Guinea-Bissau, countries where many of the current master's students come from.

The annual follow-up will be proposed too, to allow the analysis of the impacts of the suggested and implemented good practices and it would be possible to identify factors and good practices that could be adopted.

Future research can be carried out considering other stakeholders, for example, employers, government, society, etc., as HEIs must also meet their needs.

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